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Calendar Items

June 14, 2006	Recycling Stakeholders Meeting Hutchinson, Kansas (tentative)
July 28, 2006	CPI & Waste Tire grant deadline (grant availability to be announced in Spring 2006)
August 18, 2006	HHW grant deadline
August 22-24, 2006	Kansas Environment Conference Topeka, Kansas

Solid Waste Update

Kansas Department of Health & Environment

Prepared & Distributed by
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Solid Waste Update

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The City of Lawrence Compost Facility

A Leader on Environmental Issues

by Ken Powell, Bureau of Waste Management

The city of Lawrence has a long history of being a leader on environmental issues in Kansas. As part of their waste reduction and recycling program, the city began a voluntary curbside collection program for yard waste in 1993. This action put them at the forefront of the compost industry in Kansas. In 1995, participation in the program became mandatory and all yard waste was picked up separately from the refuse stream. From 1995 to 2001, the city averaged 7,000 tons per year of yard waste at the facility.

Currently, the city of Lawrence's Solid Waste Division provides separate residential city-wide collection services for grass clippings and leaves every Monday from about March until near Christmas. These materials are trucked to the city's Wood Recovery and Composting Facility. In 2005, 9,200 tons of grass clippings and leaves were collected and composted resulting in a savings of $176,180 in avoided disposal costs. Yard trimmings make up 30 percent of Lawrence residential trash by weight.

The City of Lawrence Compost Facility

Through the use of local funds and grants, the program has grown from a small composting facility on East 8th Street to a much larger composting facility on East 11th Street. The 8th Street site was less than three acres of dirt pad. That site was almost always overflowing with yard waste and all of the compost was turned with a loader.

A Vermeer tub grinder was purchased for use at the site in 1999 with the help of a KDHE grant. In 2001, a Wildcat turner that mounts on the front of a loader was purchased with another grant. These two pieces of equipment helped improve the efficiency of site operations and the quality of the finished product. Lawrence's composting program will be adding a screen later this spring. This will allow the city to provide a higher quality product to their residents.

As part of a study performed by Kansas State University in Spring 2003, the herbicide Clopyralid was found in the Lawrence compost. The city developed a plan that included retesting and no distribution in the Fall 2003 because the level of Clopyralid was still elevated. They also developed educational material and visited with the lawn care industry in the city to determine the source and help prevent additional contamination. Through these efforts, the city

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In This Issue . . .

Special Features

KANSAS DON'T SPOIL IT!

South Hoisington Illegal Dump Clean Up Nears Completion

by Bob Medina, Bureau of Waste Management

During the latter part of 2003, the Bureau of Waste Management received a complaint from a Hoisington citizen who was concerned that his children and others might get hurt playing around all the junk and solid waste that had accumulated in an area south of town known as South Hoisington. The South Hoisington problems are a result of years of illegal dumping and neglect.

Over several months, the Hoisington City Council and the Barton County Commissioners discussed the possibility of using KDHE's Illegal Dump Clean Up Program to improve the area. After a decision was made to proceed with the clean up, 78 property owners were contacted for permission to come onto their property to complete the clean up. Landowners signed legal documents to allow Barton County to perform clean-up activities on their properties.

Volunteers from the town of Hoisington conducted the first phase of clean up. Volunteers worked for two days in January 2005 collecting about 5,000 waste tires weighing over 72 tons. The cost for cleaning up the tires was $6,265.10.

Barton County's solid waste department went to work next. Household hazardous waste was collected from all abandoned structures and Clean Harbors Environmental Services was hired to properly dispose of the waste. Types of waste collected were aerosol cans, paint, flammable liquids, waste batteries, pesticides, used oil, wood preservatives, PCB's and automobile fluids. The cost for cleaning up household hazardous waste came to $1,966.

Barton County then solicited bids for the major site clean-up work on all 78 properties. Some of the abandoned structures needed to have asbestos removed. After the asbestos was removed, the contractor proceeded to demolish unsafe structures. The contractor's work was completed in early February 2006.

McPherson County, which owns a large wood waste grinder, was asked to help in the clean up efforts of South Hoisington by providing service to produce mulch from unwanted trees and brush. Barton County contracted with McPherson County and mulch is now being stored at Hoisington's nearby burn site. Hoisington has also established a temporary storage area for trees at the burn site where local citizens may come to cut wood for fireplace use.

While work has been going on in South Hoisington, another project has been underway. KDHE has been producing a video to show what South Hoisington looked like before, during, and after the clean up. As part of this effort, information has been collected from former residents of South Hoisington, describing what South Hoisington was like while they lived there. South Hoisington was predominately occupied by African-Americans from the turn of the century to recent times and this video will document that interesting part of Kansas history.

Final work to completely restore South Hoisington should be finished in spring 2006. Estimated costs for the entire project are $350 - $400,000. Barton County, along with all landowners, have pledged to take a pro-active position following clean up efforts to prevent illegal dumping from recurring in the area. For more information on KDHE's Illegal Dump Program, contact Bob Medina at (785) 296-6617 or e-mail: bmedina@kdhe.state.ks.us.

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Plumb Thicket Landfill Opens

by Paul Graves, Bureau of Waste Management

Test your knowledge – which of the following are true statements?

a) Plumb Thicket Landfill in Harper County is currently operating.
b) It is the first new Subtitle D MSWLF in Kansas since 1996.
c) It is the subject of ongoing lawsuits.
d) It is ensconced in a dense thicket of plumb (perfectly vertical) trees.

If you identified (a)-(c) as true statements, congratulations, you are a landfill trivia wiz. If you thought (d) was correct, you are plumb wrong.

Many people have been following the Plumb Thicket Landfill saga since Waste Connections applied for the permit back in August 2002. After state reviews and a hearing, the application was placed on hold from July 2003 through December 2004 due to a district court ruling on the local zoning approval. The Kansas Supreme Court overruled the lower court in December 2004, allowing the permit process to continue. The permit was issued Sept. 16, 2005 for a 229-acre disposal area on the 958-acre property. The first lined cell (five acres) was completed in December 2005. On Jan. 19, 2006, Waste Connections began disposing municipal solid waste in Plumb Thicket Landfill.

According to Waste Connections, the initial disposal rate will be about 100-150 tons per day, consisting of municipal solid waste from Sumner and Cowley Counties, as well as some loads from Harper County. After the entrance road construction is completed (anticipated in mid-February), the landfill will formally open to Harper County and Waste Connections will commence hauling waste from Wichita, eventually disposing an estimated 1,500-2,000 total tons per day in this landfill. This will eliminate or greatly reduce the amount of waste exported to Oklahoma, and will significantly decrease Waste Connections' haul distances for waste collected in south-central Kansas.

A group called Tri-County Concerned Citizens (TCCC), which opposed the landfill, has initiated a lawsuit against KDHE. TCCC has also filed intent to sue the U.S. EPA. Now, about the thicket. There are numerous trees in stream bottoms and depressions along the central, west, and southern parts of the property. Most of these areas will remain undeveloped within the 750 to 4,000-foot buffer around the landfill. Having seen these trees firsthand, I can attest that they are un-plumb. So, the facility name is somewhat of a conundrum. I have heard a hypothesis that some of the trees bear wild plums, and perhaps a misspelling occurred. At any rate, one thing is certain: when it comes to controversy, this landfill has been plumb in the thick of it.

BWM Continues to Work with CAFOs

by Ron Smith, Bureau of Waste Management

The Bureau of Waste Management (BWM) has been working under a grant from the Office of Home Land Security since late 2004 to help Confined Animal Feeding Operation (CAFO) owners identify emergency burial sites in case of a foreign animal disease outbreak. The Kansas Animal Health Department reports that there are 527 CAFOs. Currently, 205 disposal site applications have been approved and another 100 are under review.

In addition, the KDHE Southeast District Office has begun an initiative to include the poultry industry in the southeast part of the state in this program. This initiative was started due to recent developments of avian flu outbreaks around the world which could eventually affect sites in Kansas.

Small Arid Landfills Audit Project *(continued from page 3)*

the supervisors and operators of each landfill. At each SAL, Bolton walked and photographed the site, measured time and distance of specific work items and evaluated the productivity of various operational tasks. Typical site conditions and operating procedures were noted, including current procedures for pushing, spreading, compacting, and covering the waste. The visits provided Bolton a clear understanding of the site-specific conditions for each landfill.

The audits also included an evaluation of each landfill's performance based on regulatory requirements and industry standards. Responses from supervisors and operators based on the field visits were uniformly positive.

Bolton prepared reports for each SAL. He analyzed the key operational aspects of each SAL and made recommendations for operational improvements at each facility, addressing issues such as equipment utilization, maintenance, safety, site development, waste handling, traffic flow, erosion control, fill sequence planning, soil use, and financial issues. These reports were provided to the supervisors and operators of these facilities. In addition, a summary report on the entire project was presented at the municipal solid waste landfills (MSWLF) and SAL Operators' Training Course on Feb. 22-23, 2006 in Great Bend. During the training course, Bolton provided operations and safety training to managers, supervisors, and operators of SALs and safety training to operators and supervisors of MSWLFs.

In summary, the operation of SALs presents special challenges. While the majority of municipal solid waste goes to larger facilities, SALs play an important role in serving the large geographic area and the low-density population of western Kansas. Encouraging and implementing efficient operation of these facilities should provide cost effective waste disposal services and help assure the viability of this important area of our State. Based on the positive responses from supervisors and operators during the field visits and at the SAL training course, this project has not only met but also exceeded our expectations. Armed with this new knowledge and training, we expect economic and operations benefits for all 27 counties and one city to follow this year and in future years. In fact, we are confident that the benefits will reduce future operating costs and improve overall landfill operations for all of the participating SALs.

Hydrogen Sulfide Gas Issues *(continued from page 5)*

H_2S gas measurements taken last summer at the APAC-Reno showed peak levels of up to 3 ppm at the landfill property boundary. Ground level samples taken directly at the landfill seeps showed concentrations above 100 ppm, which is considered immediately dangerous to human life and health. With improved drainage, water treatment and air sampling methods in place, short-duration H_2S detections in the 40 ppb range are seen rarely with most samples below the lower detection limit of 10 ppb. There are no defined standards for residential levels of health concern. Most symptoms and health impacts are based on animal and worker studies. ATSDR's limit for exposure lasting for up to 14 days is 70 ppb and 30 ppb for chronic exposure of longer than 365 days.

Sheetrock (drywall) contains gypsum, which is calcium sulfate ($CaSO_4$). When gypsum becomes wet and organic material (such as the paper on the outside of the sheetrock wallboard) is present, microorganisms decompose it. When this occurs in the absence of oxygen, this microbial decomposition creates H_2S gas. The APAC-Reno landfill had been adding ground sheetrock as an amendment in their yard waste composting operation. Excess ground sheetrock was disposed of in the landfill. Grinding the material increased the reactive surface for decomposition and accelerated H_2S gas production.

Currently, KDHE, JCED and APAC-Reno are cooperating on plans to remove and treat contact water and extract H_2S and other gasses from the interior of the landfill. A gas monitoring system has been set up with an alarm system to notify the parties if H_2S gas levels rise to levels of concern. Very little gas emissions have been detected during the winter months but corrective actions will be further evaluated when higher rainfall and ambient temperatures return in the spring.

Current estimates indicate it will take at least two years to remove contact water from inside the landfill. Monitoring and corrective actions may be necessary for several more years as long as there is a potential for H_2S gas release. To date, no significant H_2S gas problems have been observed at any of the other 111 active C&D landfills in Kansas.

Small Arid Landfills Audit Project

by Dennis Degner
Bureau of Waste Management

Under a rural development grant from the U.S. Department of Agriculture, operational audits of 28 small arid landfills (SALs) were performed during November and December 2005 and early January 2006. Neal Bolton, nationally recognized landfill expert and professional engineer, conducted the operations audits under contract with the Kansas Department of Health and Environment. The 27 counties and one city that participated in the project were: Barber, Cheyenne, city of Sharon Springs, Clark, Decatur, Gove, Greeley, Hamilton, Haskell, Hodgeman, Kearney, Kiowa, Logan, Morton, Norton, Osborne, Phillips, Pratt, Rawlins, Rooks, Rush, Sheridan, Sherman, Stanton, Stevens, Thomas, Trego, and Wichita.

In the first phase of the project, a landfill operations questionnaire was completed by the supervisors and operators of the participating facilities to provide data to help evaluate machine owning/operating costs and production rates as well as to evaluate machine suitability to specific tasks and level of service.

Site visits were conducted by Bolton to present and discuss the responses obtained from the questionnaire previously sent to

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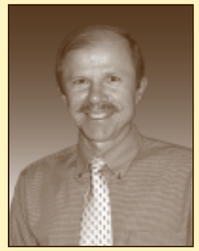
KANSAS DON'T SPOIL IT!

www.kdheks.gov/waste

Get to Know KDHE Solid Waste Staff

Many of you may know Bill Bider, or think you know him. Here are some personal facts to help you know him better.

E-mail us at bwm_web@kdhe.state.ks.us to tell us who you would like to see featured in the next issue.



Bill Bider

Position in KDHE/BWM:	Director, Bureau of Waste Management since 1993
Birthplace:	Camden, New Jersey
Life in Kansas:	Bethany College 1972-1976 University of Kansas 1976-1977 Overland Park 1977-1993 Topeka 1993-present
Family:	Married to Robyn (from Garden City) March 1981 One son, Lucas, born 1990
Other job experience:	Trans World Airlines, Manager - Environmental Protection 1985-1993 Franklin Associates, Ltd. 1977-1985
Favorite pastime activities:	Running, coaching high school basketball at Cair Paravel Latin School, Bible study leader, golf
Favorite food:	Italian (all kinds) including pizza (plain cheese piled high)
Person(s) who influenced your life significantly:	High school math teacher, Mr. Williams, who encouraged me to pursue science and math studies
Person dead or alive you wished you could meet:	Noah, to talk about his ark and the flood
Book you would recommend:	"Battle for the Beginning", by John MacArthur
Favorite vacation:	Zion National Park with family in 2001
Little known fact:	Has run over 40,000 documented miles in running logs (about twice around the world)

Get Caught Recycling!

by Rodney Ferguson, Bureau of Waste Management

What do former Gov. Mike Hayden, television broadcaster Bill Kurtis, Sen. Sam Brownback and former college basketball stars Wayne Simien and Kendra Wecker have in common? They're all promoting an important effort in Kansas: recycling!

You'll soon see (or may have already seen) these famous individuals on public service announcements, on posters, and in other locations as they each use their own unique style to urge us all to take a greater role in recycling to conserve natural resources and landfill space.

This is all part of the 'Get Caught Recycling' promotional campaign developed by the Kansas Department of Health and Environment (KDHE). The promotion began in Fall 2005 and will continue through 2006 with additional Kansans participating in the effort. They include crop artist Stan Herd, state spelling bee champions Kent and Scott Toland of Iola, the president and CEO of Wolf Creek Nuclear Generating Station Rick Muench, and Fiesta Mexicana Queen Melissa Cooper of Topeka.

"Our goal with this campaign is to reinforce the recycling behavior of Kansans who currently recycle and encourage those who don't to join with these well-known Kansans and 'Get Caught Recycling,'" says Bill Bider, director of KDHE's Bureau of Waste Management. Hopefully, most Kansans will connect with these individuals and recognize that it's 'cool' to recycle."

Kansans currently recycle and compost more than 700,000 tons of materials, enough to completely fill approximately four large football stadiums. Experts believe additional recycling programs and full public participation could double the amount of waste kept out of Kansas' landfills.

"We're grateful to every Kansan who recycles in our state and we're excited to see the potential this campaign has for making recycling a habit for all of us," said KDHE Secretary Roderick L. Bremby. "If everyone does their part to recycle, the impact we would see in Kansas would be tremendous."

During 2006, 'Get Caught Recycling' will include more local efforts where KDHE will encourage local officials to promote their own recycling heroes. KDHE will work through its statewide network of recycling organizations to promote these recycling heroes in Kansas communities.

For more information on the "Get Caught Recycling" campaign go to www.getcaughtrecycling.org and to learn more about recycling opportunities in your community, go to http://www.kansasbirp.com.

A New Recycling Group in Kansas

by Kent Foerster, Bureau of Waste Management

KOR
KANSAS ORGANIZATION of RECYCLERS

A new group recently formed to help serve the Kansas recycling and waste reduction community. They are called the Kansas Organization of Recyclers, Inc. (KOR) and are comprised of public/governmental entities, business professionals, non-profit organizations and private citizens that support waste reduction, composting, reuse and recycling efforts in Kansas. KOR provides advocacy, information, technical support, networking, and educational opportunities in partnership with local, state, regional, and national organizations. KOR has an ongoing membership drive with elections in September.

If you come to WORKS!, March 28-30, 2006 at the Highland Hotel and Convention Center in Great Bend, Kansas, you are very likely to meet KOR officers and volunteers because they are a new WORKS! partner. They will be part of the welcoming during the General Session on Wednesday, March 29 and are hosting some social events along with the Recycling Markets and E-Waste breakout session and the Recycling Roundtable discussions on Thursday, March 30.

If you can't make it to WORKS!, check KOR out at their web site www.kskor.org.

Hydrogen Sulfide Gas Issues at C&D Landfills

by Marty Burke, Bureau of Waste Management

In June 2005, the Johnson County Environmental Department (JCED) began receiving odor complaints from an area around 162nd Street and Metcalf Avenue in the southeast part of the county. JCED staff knew the APAC-Reno construction and demolition (C&D) landfill in the area had a history of temporary odors due to retention ponds "turning over" when temperature changes caused oxygen depleted water from the pond bottoms to rise to the surface. Also, because the complaints described a "rotten egg" type smell characteristic of hydrogen sulfide (H_2S) gas that is sometimes produced in sewer systems, the Johnson County Wastewater Department checked their facilities as well.

Soon, it became apparent the odors were coming from liquid flowing out of the waste at the APAC-Reno C&D landfill. APAC-Reno is the largest C&D landfill in the state and the seventh largest landfill overall. It accepts wood, bricks, roofing material, concrete, floor coverings, plaster, drywall, plumbing fixtures, electrical wiring and construction related packaging from Kansas and Missouri. Johnson County advised the landfill owner to apply ferrous chloride to the flows at the lower portion of the landfill to convert the hydrogen sulfide to another compound and prevent its release to the air. Ponds were also aerated in an attempt to control the odors.

Complaints increased at the end of July after a period of wet weather, prompting JCED and KDHE staff to more closely monitor the landfill and gather information to assess the problem. Water infiltration into the landfill appeared to be a contributing factor which required the owner to perform corrective actions to prevent local runoff and precipitation from entering the waste area. Process water from the air pollution control system of an onsite asphalt plant was also redirected. *(continued on page 6)*

City of Lawrence *(continued from page 1)*

has brought the toxicity level of Clopyralid down to where it is safe to distribute the compost again.

In March 2004, the composting operation moved to its new facility on East 11th Street. This site is an 11 acre field on the east side of the wastewater treatment plant. A six-acre asphalt pad was constructed on the site before operations began. This new site allows for easy access, plenty of room for composting and wood grinding, and a good place to distribute the compost to the public. The asphalt pad allows for all weather access, which is important in the spring and fall when grass and leaf delivery is the heaviest. Water is prevented from running onto the site by a large berm and runoff from the pad is controlled by a grass filter strip that is 50 feet wide and extends the full length of the pad.

> *"Yard waste is relatively easy to collect, and the operating costs for composting this resource are nearly covered by avoided hauling and disposal costs. Then, the city and its residents get to utilize the finished compost and mulch. I believe organics recycling is a great way to efficiently boost your recycling rate and conserve local soils at the same time."*
>
> *- Diana Sjogren, city of Lawrence Waste Reduction and Recycling Specialist*

Beginning in 2005, by ordinance, only cans, carts and compostable kraft paper bags could be used for yard trimmings for curbside collection. Plastic bags were no longer allowed for the containerization of yard waste. The new policy for yard waste containers will: (a) increase collection efficiency by reducing collection time; (b) improve worker safety by eliminating the need to cut open plastic bags with box cutters; and, (c) yield higher quality compost by reducing plastic contamination.

In 2005, the city's Parks and Recreation Department diverted 1,729 tons of brushy wood waste from the landfill. Two programs administered by the Parks Division contributed to this diversion: (1) a residential drop-off chipping service at the Wood Recovery and Composting Facility (1,223 tons); and, (2) Right of Way removal of tree and brush debris (506 tons). Wood chips produced through these programs were used on city landscape projects and made available to the community through the Parks Division Wood Chip sales. Avoided disposal costs attributed to the brushy waste programs was $33,110.35. Revenue generated from the sale of wood chips was $8,128.